

Greater Suttle Lake Vegetation Management Project

Recreation Report

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Introduction

This report documents the effects of the Great Suttle Lake Vegetation Management Project on recreation resources located in the project area. The project area is located in T13S, R08E, sections 24, 25, and 26 at about 3,400 feet in elevation. The project area is about 249 acres in size and is located on Sisters Ranger District, Dechutes National Forest.

The Suttle Lake area is one of the highest use areas for developed recreation on the Sisters Ranger District and provides year round recreation opportunities. Decades of fire suppression has protected the infrastructure in the area (such as campgrounds, boat ramps, and organizational camps), but is creating a climax forest condition which would normally be reset by natural wildfire. This type of forest structure is most susceptible to damage by pathogens and insects, and is also affected by abiotic factors such as wind, drought, and snow which cause the deterioration and demise of trees. These influences create hazardous tree conditions that directly impacts the health and safety of the public, as well as degrades the recreation setting (Long-Range Planning for Developed Sites in the Pacific Northwest).

Managing the impacts of these damaging agents is difficult as one must know the location and health condition through time, of individuals, populations, and communities of trees and other plants. Without this knowledge, recreation managers will respond to tree hazards and stand conditions based upon perceptions of priorities at that point in time, and only short term remedies will be used. Without an organized plan, hazard tree mitigation will eventually result in the complete removal of the trees that originally attracted users to recreation sites, and lead to the destruction of the recreation resource. A proactive approach is needed to address the immediate health and safety concerns in a timely manner, reduce the risk of wildfire, provide an integrated long-term vegetation plan, and increase overall forest health (Long-Range Planning for Developed Sites in the Pacific Northwest).

The proposed action takes a comprehensive approach to managing vegetation in this intensive recreation area. In addition to abating (felling) hazards in the form of *danger trees*¹ and *hazard trees*² to protect the public and reduce potential damage to recreation infrastructure, trees in the project area would be selectively harvested to improve overall forest health by reducing the extent of dwarf mistletoe and addressing susceptible host trees in areas with stem and root diseases. Reforestation of disease resistant trees species would be conducted to facilitate recovery in areas of tree removal. This would result in a decreased need (both short- and long-term) to address safety concerns. Felled trees associated with this project may be left on site to meet down wood needs (outside of developed recreation areas); removed as forest products to maintain safe recreational experience; or moved to support habitat restoration activities, such as in-stream work to restore fish habitat.

The Forest Insect and Disease Evaluation prepared for the project states, “Areas managed for intensive recreation, and roadsides that access popular recreation areas, need to periodically have forest health evaluations and at times, long-term planning efforts to address public safety concerns related to on-going hazard/danger tree issues and underlying forest health conditions. Forests and vegetation in recreation areas are dynamic and change due to disturbances. Without a long-term approach, hazard/danger trees may continue to be removed without planning for replacement of overstory trees without regeneration in mind or without considering forest diseases and insects that can impact public safety, management options, expectations, stand structure, and fuel profiles. A primary objective of this Project is to promote healthier forest stands by reducing forest disease and insect levels in the long-term related to public safety concerns” Oblinger and Flowers (2019)

¹ Flip, G. 2016. Field Guide for Danger-Tree Identification and Response along Forest Roads and Work Site in Oregon and Washington. USDA Forest Service, Forest Health Protection, Pacific Northwest Region, Portland, Oregon. R6-NR-TP-021-2016.

² Flip, G. 2014. Field Guide for Hazard-Tree Identification and Mitigation on Developed Sites in Oregon and Washington Forests. USDA Forest Service, Forest Health Protection, Pacific Northwest Region, Portland, Oregon. R6-NR-TP-021-2013.

Douglas- fir dwarf mistletoe can also affect recreation assessts. “The presence of Douglas-fir dwarf mistletoe in campgrounds and other developed recreation sites has different management implications than it does in forests where timber, wildlife, watersheds, and wilderness are management objectives. The disease, if left unchecked, can significantly increase the managing agencies' exposure to liability from damage claims and lawsuits from accidents involving infected trees. Federal agencies managing these sites have the responsibility to discover and correct unreasonably dangerous conditions to minimize the potential for injury to invited users or damage to their property. Responsibility to actively minimize hazards is roughly proportional to the degree of development of a recreation area. Highly developed sites, such as campgrounds, infer a greater degree of responsibility to provide safe conditions than less developed areas.” (Management of Douglas-fir Misteltoe in Forested Campgrounds and Other Developed Sites in Eastern Washington).

Because of heavy recreation use in the Suttle Lake area, it is extremely important to maintain a high level of scenic quality. Some trees that are evaluated under the general silviculture prescription as fell and remove, may conversely be hand selected as “character” trees to retain if the tree provides for visual esthetics and diversity, retains scenic qualities and cover, or insulates clumps and stands from wind throw where needed in campgrounds, day use areas, organizational camps, and along the shoreline in riparian areas. These character trees may receive other treatment methods such as mistletoe pruning, dead top removal, or other measures where feasible. Visual appeal would be enhanced, and privacy screening would be developed, through tree planting, transplanting and/or seeding.

Regulatory Framework/Management Direction

Management Plans

The project area is located on lands managed by the Deschutes National Forest Land and Resource Management Plan (Forest Plan), as amended. Recreation activities within the project area occur primarily in lands designated for Intensive Recreation. The Forest Plan was amended in 1994 by the Northwest Forest Plan which allocates the Project area as Administratively Withdrawn, with some smaller sections as Late Successional Reserves and Matrix.

Deschutes Land Resource Management Plan – Intensive Recreation Standards and Guidelines

Ponderosa Pine:

M11-17 Ponderosa pine will be managed to maintain or create a visual mosaic of numerous, large diameter, yellow-barked tress with stands of younger trees offering visual diversity and a sense of depth in landscapes viewed from recreation use areas.

M11-18 Old growth characteristics, such as yellow, deeply-fissured bark are desirable.

M11-19 Diversity in species, where biologically possible is desirable. Species such as vine maple, aspen, and occasional stands of fir or lodgepole pine are desirable for added visual interest. Shrubs and groundcover species are also a desirable visual component.

M11-20 Small, natural-appearing open spaces help provide a sense of depth and are a desirable visual component.

Mixed Conifers:

M11-21 Mixed conifer stands will be managed to perpetuate or enhance the characteristic (or natural) landscape. The characteristic landscape normally contains stands that are visually dense, though not necessarily continuous. Diversity in tree and shrub species and in diameter classes produces the desired visual character when viewed from recreation use areas.

M11-22 Small, natural appearing openings are desirable, and are an important visual element of the characteristic landscape in mixed conifer stands.

M11-23 Large diameter old growth characteristics are an important visual component. Ponderosa pine is a desirable component of these stands, where it either exists or could be introduced.

Forest-wide Management Direction

Recreation Opportunity Spectrum (ROS)

The Recreational Opportunity Spectrum (ROS) is a description of various attributes that contribute to a particular recreational setting including access, remoteness, naturalness, facilities and site management, social encounters, and visitor management. The ROS categories for the Management Area within which a specific project is located should provide overall guidance to manage the site compatible with the kinds of recreation opportunities being provided by the larger area of which the site is a part. The MA within the project area is Roded Natural.

The Forest Plan describes Roded Natural as follows:

Area is characterized by predominately natural-appearing environment with moderate evidence of the sights and sounds of humans. Such evidence usually harmonizes with the natural environment. Interaction among users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities. Large mammals tolerant of humans may be present; those not tolerant present infrequently. There is a prevalence of smaller wildlife species

Forest Service Manual (FSM) 2333.03

The FSM establishes priorities for development and management of recreation sites in the following order: (1) Ensure public health and safety; (2) Protect the natural environment of the site; (3) Manage and maintain sites and facilities to enhance users' interaction with the forest resource; and, (4) Provide new developments that conform to the National Forest recreation role. The FSM also defers to ROS for standards, describes site plan content requirements, and directs managers to carefully consider future operation and maintenance cost when designing new facilities.

Analysis Methods

Analysis Assumptions and Methodology

The analysis of effects of the proposed action are based on the following assumptions:

- Detailed descriptions of the proposed action and alternatives are included the Suttle Lake CE. Effects of the proposed action are based on those descriptions.
- Public safety concerns resulting in public access would be mitigated as deemed necessary by the Forest Service.

- Effects of the proposed action are based on the assumptions that the following recreational resource project design criteria would be incorporated:

Project Design Criteria

The following design features are required to ensure compliance with the regulatory framework for this resource and/or to reduce the risk of adverse impacts to this resource. A description is provided as to when, where and how the design feature should be applied and/or what conditions will trigger the need to apply the design feature.

1. Identify and remove all hazard trees (pursuant to 'Field Guide for Hazard-Tree Identification and Mitigation on Developed Sites in Oregon and Washington Forests) where fixed built environment and transitory use areas such as potential tent pads (flat areas adjacent to camp units) are targets. Removal of trees defined as a '7' hazard class rating or greater may occur to achieve project objectives. District recreation staff will work with the silviculturist and timber sale layout crew during the identification and marking of hazard trees around developed recreation sites.
2. Re-vegetate to provide visual diversity and develop privacy screening where needed in campgrounds and organizational camps.
3. Operations other than marking and cruising within or adjacent (within 1/2 mile) to recreation sites are discouraged to occur between Memorial Day and Labor Day. Activities proposed to occur within this date range must be coordinated with Recreation Team Lead.
4. Identify a tentative schedule for treatments which highlights when a site may be closed and likely methods for treatment and slash removal for that site. Notice of tentative site closure requirements to facilitate operations will be provided to Recreation Team Lead in advance of the operations commencing. Consider exempting these campgrounds from reservations during anticipated operating periods and establishing first-come, first-served camping for flexibility in scheduling operations. Campground reservations systems must be cancelled, specifically yurt reservations in Link Creek, to accommodate this project where operations are expected to occur within reservation periods.
5. Implement a communications plan to notify Forest visitors, special use permit holders, and others of project operations. Post temporary educational/interpretive information to explain when, where, and why treatments are occurring. Provide information on treatment locations and timing on forest websites or mobile applications where possible. Emphasize communications with public using all effective means available.
6. Obliterate or camouflage temporary haul routes and avoid operations which create appearances of temporary roads within visual distance of developed sites or roads upon project completion.
7. Avoid creating vegetative conditions that would facilitate creation of unauthorized trails, dispersed recreation sites, or that would facilitate unauthorized motorized access.
8. Timber sale layout crew will work with Recreation staff to minimize the visual impacts of marked trees and unit boundaries as much as possible. Painted trees should not be visible from recreation facilities within a reasonable time period following completion of project activities.
9. Prioritize removal or treatment of slash generated from project operations that are in developed recreation sites.

10. Avoid high volume wood chip concentrations within recreation sites creating an unnatural landscape and fuel loading. Do not spread wood chips in the immediate vicinity of camp fire rings extending approximately 10 feet from fire pit edge.
11. Optimize tree planting success by using proven reforestation methods.
12. In addition to following visual resource project design features to maintain visual quality objectives, cut trees leaving flush stumps within sites and at an approximate 50' buffer around sites except where trees are specifically identified and marked to be high cut to serve as a bollard-type barrier in recreation sites.
13. Whenever possible, landings, slash piles, and other discordant visual evidence of harvest and treatment activities should not be visible from campgrounds and group camps following completion of operations. Improve campsite pads and other recreation infrastructure as needed to assure slash or other evidence of project operations is not evident.
14. Avoid creating sharply diverse vegetation conditions immediately adjacent to campgrounds and group camps. Emphasize a "natural" look of the forest as viewed from these facilities.
15. Retain trees that hold signs, if possible. Replace trail signs that may be damaged or removed during project operations.
16. Maintain and protect existing trails in the project area. Trails must be cleared of all trees and debris at the end of the project. Trail closure or temporary reroutes will be needed during project operations.

Key attributes that contribute to the recreational value of the area

Key attributes that contribute to the recreational value of this area that could be affected by the project include scenery, timing and access to recreational activities and permitted special use activities, public safety, and revenues.

Scenery – How might scenery as viewed from the campgrounds, day use areas, roads and trails be changed by the proposed actions? How does that affect the physical recreational setting and people's perception of the "natural" quality of their recreational experience?

Access – What kind of access is affected by the project, what is the timing or season when recreational access may be affected, and what access to what facilities or opportunities may be affected? How might changes in access affect user convenience and recreational opportunities, or access for facility maintenance?

Special Use Activities – What is the timing of the project and how could that affect the organizational camps in the project area.

Revenue - What is the timing of the project and how could that affect the revenue for the concessionaire and organizational camps in the project area.

Safety – How might the proposed project affect the public's safety, including ingress and egress to the Suttle Lake project area?

Recreation Resources - Existing Condition

The greater Suttle Lake area receives some of the highest recreation use on the Sisters Ranger District. The area contains two organizations camps (Suttle Lake United Methodist Camp and Camp Tamarack, both under special use permits), four campgrounds (Scout Lake, Link Creek, South Shore and Blue Bay Campgrounds) and four day-use areas (Blue Bay, Scout Lake, Suttle Lake Picnic, and Suttle Lake Boat Launch). In addition, there are numerous non-motorized trails connecting the lakes in the greater Suttle Lake area.

While exact numbers of visitors and user days are difficult to quantify, an estimated 100,000 people recreate annually within the general area and utilize transportation routes and designated parking areas. Based on 2013 data, about 15,000 people³ had registered user days between April 1 and December 31. Recreation use is diverse including swimming, boating, waterskiing, fishing, running, hiking, mountain biking, youth events, retreats and other social gatherings. All campgrounds within the project area are managed under a concessionaire permit with Deschutes Recreation

Predominate recreational activities in the project area include hiking, camping, water sports, and cross country skiing and snowshoeing in the winter months. Other recreational opportunities include the highly popular Suttle Lake trail, swimming opportunities at the Cinder Beach day-use area, and cultural and culinary activities at the Suttle Lake Resort and Lodge. Forest diseases and past insect damage from western spruce budworm are prevalent in the project area and create long-term public safety and forest health concerns. Whole tree or partial tree failure is an on-going concern; for example, large Douglas-fir brooms can weigh in excess of 2,000 pounds. In addition to the readily identifiable dwarf mistletoe in Douglas-fir and white fir, there are confirmed occurrences of root and stem rots⁴ throughout the project area. Due to the interaction of these diseases (and past insect damages) hazard tree mitigation has been an ongoing safety concern for over 20 years. At least two separate tree failure events resulted in vehicle damage since 2013 and could have resulted in serious injuries or fatalities.

Due to the numerous root and stem diseases and concentration of campgrounds and recreation, the greater Suttle lake areas has served as a training location for hazard tree identification and education events. Campground and organization camp hazard tree assessments are conducted to mitigate the short-term forest health concerns. Hazard trees within the camp setting must be evaluated by the Forest Service before they can be felled and removed.

Campgrounds

There are four campgrounds within the project area that are operated under special use permit by Deschutes Recreation. These all receive heavy use and the minimum operating season for each facility is as follows:

Campground	Season of Use
Blue Bay	May 17 – September 22
South Shore	May 17 – September 22
Link Creek	April 19 – October 13
Link Creek Yurts	Year-round
Scout Lake	May 17 – September 22

³ This only includes individuals or groups that registered for at least one day at one of the three Suttle Lake Campgrounds.

⁴ Current root, butt and trunk rots include: red ring rot (*Phellinus pini*), brown trunk rot (*Fomitopsis officinalis*), red belt fungus (*Fomitopsis pinicola*), Armillaria root disease (*Armillaria ostoyae*), Annosus root disease (*Heterobasidion annosum*), rusty red stringy rot (*Echinodontium tinctorium*) and Schweinitzii root and butt rot (*Phaeolus schweinitzii*)

Summer Trails

There are several Forest Service trails within the project area, the Suttle Lake Loop #4030 (3.5 miles long) and the Two Lakes Trails #4032 (.66 miles long) and #4032.9 (.6 miles long).

Day Use Areas

There are four day-use areas (Blue Bay, Scout Lake, Suttle Lake Picnic, and Suttle Lake Boat Launch) in the project area which all receive heavy use from Memorial Day to Labor Day.

Dispersed Recreation

Due to the location of numerous campgrounds and developed day use sites in the project area and lack of opportunity for dispersed recreation, it is a low concern for this project.

Special Uses

The project area contain two organizational camps that are managed under special use permit by the Sisters Ranger District. The Suttle Lake United Methodist Camp provides environmental education opportunities for youth, among other programs. The camp was originally established in 1925 and by 1948 became part of the statewide youth camp program of the Methodist church and is managed under a special use permit with the Sisters Ranger District. The camp contains at least 30 structures and hosts youth, religious events, as well as outdoor education.

Camp Tamarack began as an exclusive horse camp for girls in 1935 at the height of the Great Depression. The existing lodge and associated building were built in 1960s. The camp specializes in providing children of all socioeconomic levels with an opportunity to have an authentic “camp experience”. The camp also partners with organizations to provide outdoor education programs for primary and secondary education. The camp contains 21 structures with maximum camper occupancy of around 130 campers.

Suttle Lake Resort, while not in the project area, is on the east side of Suttle Lake and will be impacted by danger tree removal in the roadside corridor as it provides access to their facility.

Effects Analysis

Direct and Indirect Effects- *No Action*

Under the no action alternative, the proposed action would not take place.

There would be no change in current management direction or in the level of management activities. General recreational use within the project area would continue to occur. Trees would continue to be affected by disease, which would increase safety concerns in these developed sites. Hazard and danger trees would continue to be managed in these areas using current resources, which means that the agency lacks the ability to do more than address a few of the major hazards in each developed site. This “piecemeal” process of dealing with these hazards on a yearly basis, only prioritizing imminent dangers, creates a major backlog of potentially hazardous trees that leaves these high-use areas in a condition that is unsafe to users.

Additionally, leaving these dead and dying trees increases the fuel load, which naturally increases the chance of wildfire spread within the project area.

The absence of an integrated long-term approach to managing disease and insects puts the public at risk, increases long term workload for managing hazards in developed sites, and fails to plan for future vegetation management.

Proposed Action – *Direct, Indirect and Cumulative Effects*

This project would remove hazard and danger trees in and around high-use developed sites and road corridors, increasing safety for users. Hazard trees would be removed if they have a rating of 7 or 8 on the Hazard Tree Rating scale. Mistletoe trees would be removed if they have a rating of 5 or 6 on the Dwarf Mistletoe Rating scale. These two systems of rating trees should be sufficient for removing hazards in the project area.

The recreation resource would benefit by increasing the health and safety aspects for visitors in and around high use recreation sites and organizational camps. The project will increase forest health over the long-term, improve overall vegetation conditions, and create safe conditions for camping and recreating.

Based on the analysis contained in the silviculture report prepared for the project, the campgrounds, Camp Tamarack, and the danger tree units would have the least amount of tree felling and removal, compared to the Suttle Lake United Methodist camp. Forest stand structure would not change in the campgrounds and Camp Tamarack. Stand structure within the United Methodist Camp would change from old forest multi-strata to understory reinitiation given the amount of diseased trees removed within the camp. Planting of tree species such as white pine, western larch, ponderosa pine, and incense cedar within gaps would help restore the old forest structure over time. Pruning of trees would also take place based on the criteria contained in this and the silviculture report. Pruning would help to mitigate affects on the visual resource. Pruning would not take place on Douglas-fir with a dwarf mistletoe rating of 5-6.

The scenic value of the area would be negatively affected in the short term, especially during times when machinery is present, directly after work is completed, and if landings or slash piles are visible from developed recreation sites. In the long term, however, the integrated vegetation management plan would improve the scenic quality of the area and increase screening between campsites.

Project operations would directly affect the public in the short term as campgrounds, day use sites, boat ramps, and organizational camps would have to be closed on a short term basis and visitors will be displaced during time frames where closing recreation sites or pausing the reservation system is necessary to efficiently complete project objectives. Revenue for developed sites may be negatively affected during active logging operations, but would be minimized by conducting the project outside of high-use seasons.

Project results would directly affect public health and safety by addressing stand health concerns described in the purpose and need and as related to hazard and danger tree management.

Decades of fire suppression in the area is creating a climax forest that is being impacted by insects and disease. The cutting and removal of the compromised trees would reduce insect and disease damage throughout the forest structure, as well as reduce the risk from wildfires. Decades of hazard tree management and cutting of wind throw has left a fair concentration of stumps in many developed sites and reduced the number of trees. The Suttle Lake Project will cumulatively add to the stump volume and reduction in stand as a result of hazard and danger tree management.

Conclusion

The Suttle Lake Project would have an overall positive effect on the infrastructure and recreation resources in the project area due to the reduction of hazard and danger trees and increased forest health over the long-term.

While the area may appear impacted directly following the project due to effects from heavy machinery, landings, and piles of branches, an integrated vegetation plan would maintain healthy stand structures in and around recreation sites, create a recreation resource that is resilient to wildfire, and preserve the scenic aspects of the area in the long term. The short term negative consequences of having machinery and logging operations in the area will be offset by the project being conducted outside of the busy summer season, thus reducing the impacts to visitors and organizational camps.

References

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